

### **REMARKS/ARGUMENTS**

Applicant has added new claim 25 to the application which combines the limitations of claims 1, 3, 6 and 9 therein. New claim 25 clearly overcomes all of the rejections as set forth in items 10, 11, 12 and 13 of the office action. In this regard it is to be noted that claim 25 which includes the limitations of claim 3 therein clearly overcomes the rejection of the claims in item 10 of the office action since this rejection only pertains to claim 1, 2, 11 and 17. Claim 25 also overcomes the rejection set forth in item 11 since claim 25 includes the limitations of claim 6 therein whereas the rejection in item 11 only pertains to claims 1, 3-5, 13 and 17-18. Claim 25 also overcomes the rejection set forth in item 12 of the office action since claim 25 includes the limitations of claim 3 therein whereas the rejection in item 12 only pertains to claims 1, 9-10 and 12. Lastly, claim 25 overcomes the rejection set forth in item 13 of the rejection since claim 25 include the limitations of claim 9 therein whereas the rejection in item 13 only pertains to claims 1, 6-8, 17 and 19-20.

Applicant has added new claims 23 and 24 which correspond to claims 1 and 17 respectively with the only difference being that claims 23 and 24 do not include flax in the Markush group of fibers. New claims 23 and 24 are clearly distinguished over the art of record since all of the rejections depend upon the disclosure of Galati as the primary reference. Galati pertains to fibrillated acrylic fiber which is fibrillated by the specific process disclosed in this reference. It is said that the fibrillation process may be applied to other types of fibers but Galati notes in column 8, lines 4-7, that:

Results to date establish that many other fibers do not respond satisfactorily to the present method. For example, FIG. 13 shows the results when nylon flock is treated; virtually no fibrillation is achieved.

Although Galati has determined that his particular process is suitable for fibrillating Kevlar and flax fiber in addition to the acrylic fiber, Galati fails to disclose or suggest that his process is suitable for other types of fibers. Moreover, one skilled in the art would expect that Galati's process is only suitable for the particular fibers identified in his disclosure particularly in view of Galati's statement that his results to date (thus indicating considerable experimentation) establish that many other fibers do not respond satisfactorily to his particular method. Thus, it is clear that Galati fails to disclose or suggest the fibrillated fibers of claims 23 and 24 which are limited to at least one fiber selected from the group consisting of hemp, sisal, jute and ramie fibers.

It may be argued that it would be obvious for one skilled in the art to try the method of Galati to see if it works with other fibers such as the fibers recited in claims 23 and 24. However, it is well settled in patent law that "obviousness to try" is not a legitimate test of patentability. *In re Fine* 5 USPQ 2d 1596 (CAFC 1988); *In re Antonie* 195 USPQ 6 (CCPA 1977).

None of secondary references cited by the examiner in the various rejections compensate for the above-noted deficiency of Galati. Accordingly, it is clear that claims 23 and 24 are patentably distinguished over the art of record.

Applicant has also amended independent claims 1 and 17 to require that the elementary fibers have been fibrillated by an air grinder. In addition applicant has added new claims 21 and 22 which depend respectively from claims 1 and 17 to more particularly require that the air grinder is an eddied air grinder. Support for these limitations are found in the specification on page 4, lines 13-15 and also on page 6, lines 22-32 wherein an air grinder, i.e., an eddied air grinder, is described for producing the fibrillated fibers of the present invention. The purpose of this limitation is to emphasize an important aspect of applicant's invention wherein applicant has discovered that employing an air grinder, particularly an eddied air grinder will produce the fibrillated fibers of applicant's invention having the characteristics of claims 1 and 17. In particular, applicant has discovered that the aforementioned air grinders will produce the claimed fibrillated fibers whose elementary fibers have a fibril content **greater than 3 area percent and less than 50 area percent**. In other words it is the utilization of an air grinder which produces the fibrillation fraction of 3-50% recited in the claims. It will become apparent from the below discussion of each of the rejections that none of the references cited by the examiner lead one skilled in the art to applicant's invention. In fact, as discussed below, Galati teaches away from applicant's invention.

Turning now to the rejections, the examiner has rejected claims 1, 2, 11 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Galati. In rejecting the claims the examiner acknowledges that Galati does not specifically disclose the fibril fraction of claims 1 and 17. However, the examiner urges that the fibril fraction of 3-50% is an optimizable feature. Applicant has carefully considered this rejection but it is most respectfully traversed for the reasons discussed below.

Applicant is able to achieve the particular fibril content recited in claims 1-22 through the use of the air grinder, particularly the eddied air grinder of claims 21 and 22. Galati fails to disclose or suggest any mechanism for achieving the claimed fibril fraction. The examiner alleges that the claimed fibril fraction is an optimizable feature. In order to optimize this feature using the prior art, there must be a teaching in the prior art which would enable one skilled in the art to produce the particular fibril fraction of applicant's claims.

The examiner's allegation that this feature is "optimizable" is without any basis. While it may be desirable to optimize certain features of the fibers disclosed by Galati, Galati discloses only one specific process for making his fibrillated fibers. Moreover, it is clear from Galati's disclosure that his particular process is critical to his invention and any departure from this process will not work according to the teaching of Galati. In this regard it is to be noted that Galati indicates in his disclosure that the results of his invention require that the fibrillation takes place while the fibers are suspended in a liquid, such as water, to which the fibers are inert (see column 3, lines 31-38). Moreover, Galati specifically teach away from applicant's invention by stressing that his invention does not include fibrillation in air. In this regard Galati states:

It is important to point out that exposing the fiber to the action of such blades **in air** does not achieve a desired degree of fibrillation which is useful for reinforcing composite materials; the fiber **must be suspended in liquid** and turbulently recirculated across the blades for effective results.

In view of the above it is clear that if optimization is to take place, Galati does not disclose or suggest optimization which would produce the required fibril fraction recited in applicant's claims. As noted above, applicant has discovered that the use of the air grinder produces the optimized fibril fraction recited in claims 1-22. Clearly, Galati does not disclose or suggest this feature of applicant's invention and, since Galati specifically teaches that air fibrillators are to be avoided, Galati specifically teaches away from the optimized results achieved through the use of an air grinder.

The examiner has rejected claims 1, 3-5, 13 and 17-18 under 35 U.S.C. § 103(a) as being unpatentable over Galati in view of Foster. In rejecting the claims the examiner relies upon Galati as discussed above and once again urges that the fibril fraction recited in the claims is an optimizable feature. In rejecting the claims the examiner acknowledges that Galati does not disclose the mixing of reinforcing fibers and aramid fibers and the amount of the vegetable fibers. The examiner turns to the teaching of Foster for this aspect of applicant's invention. The examiner argues that it would be obvious to arrive at applicant's invention by the combined teachings of the two cited references. Applicant has carefully considered this rejection but it is most respectfully traversed for the reasons discussed below.

As noted above, Galati teaches against applicant's invention and provides absolutely no disclosure or suggestion on how to achieve the particular fibril fraction which applicant obtains through the use of an air grinder. Foster does not compensate for this deficiency of Galati. Accordingly, neither of the references, either alone or in combination with each other, disclose or suggest applicant's invention.

The examiner has rejected claims 1, 9, 10 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Galati in view of Kesevan et al. Once again in rejecting the claims the examiner acknowledges that Galati does not specifically disclose the fibril fraction of applicant's claim 1 and urges that this is an optimizable feature. The examiner cites Kesevan et al. for their teaching regarding the use of an additive in friction material since the examiner acknowledges that Galati does not disclose the use of an additive in the friction material as per applicant's claims 9-10 and 12. Applicant has carefully considered this rejection but it is most respectfully traversed for the reasons discussed below.

As discussed above, Galati teaches against applicant's invention and provides absolutely no disclosure or suggestion on how to achieve the particular optimized fiber fraction which applicant achieves through the use of an air grinder. The secondary reference (Kesevan et al.) fails to compensate for the above-noted deficiency of Galati. Accordingly, it is clear that neither of the references, either alone or in combination with each other, disclose or suggest applicant's invention.

The examiner has rejected claims 1, 6-8, 17 and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Galati in view of Kjelby et al. Once again in rejecting the claims the examiner acknowledges that Galati does not specifically disclose the fibril fraction of applicant's invention, but notes that this is an optimizable feature. It is clear from the above discussion that Galati teaches against applicant's invention and provides absolutely no disclosure or suggestion on how to achieve the particular optimized fiber fraction which applicant obtains through the use of an air grinder. Galati specifically avoids air grinders. The secondary reference (Kjelby et al.) fails to compensate for the above-noted

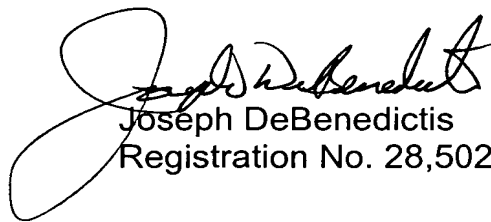
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deficiency of Galati. Accordingly, it is clear that neither of these references, either along or in combination with each other, disclose or suggest applicant's invention.

In view of the above arguments and amendments to the claims, applicant respectfully requests reconsideration and allowance of all the claims which are currently pending in the application.

Respectfully submitted,

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Joseph DeBenedictis  
Registration No. 28,502

BACON & THOMAS  
625 Slaters Lane, Fourth Floor  
Alexandria, Virginia 22314  
Phone: (703) 683-0500

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